

**REMARKS****Restriction Requirement**

The examiner made the restriction requirement final in the second office action. During a telephone interview held May 6, 2003, Applicant explained that the argument in the previous response was an attempt to admit on the record that Groups II and III are not  
5 patentably distinct from Group I. The examiner indicated that the statement made was not clear, and requested that Applicant clarify the record.

**Applicant hereby expressly admits on the record that the claims of Groups II and III are not patentable over the elected claims of Group I.** Applicant respectfully requests withdrawal of the restriction requirement and consideration of the claims of Groups  
10 II and III together with the claims of Group I. MPEP 808.02.

Based on the foregoing, the restriction requirement should be withdrawn as to all of the claims, and the following point should be moot. However, for purposes of thoroughness, Applicant points out that claims 76-85 originally were included in "Group I." See Paper No. 10. At some point, the examiner withdrew claims 76-85 from consideration. If for some  
15 reason the examiner does not reinstate all of the pending claims in response to the admission made above, Applicant requests reinstatement of at least claims 76-85, as part of the original Group I.

**Information Disclosure Statement**

After some discussion during the telephone interview about the requirements of 37  
20 C.F.R. § 1.97 and the relevance of the references, the examiner agreed to enter the previously filed Form 1449 so that the references on that Form 1449 will be listed on the front of any

patent that issues in this case. As the examiner requested, Applicant submits a copy of the previously filed Form 1449 together with this response. To the extent that any fee is required, the Commissioner is hereby authorized to charge any such fee to Deposit Account No. 50-0997(SWRI-2749A).

5 **Question regarding Fracture Toughness**

Since Applicant misunderstood the previous question regarding fracture toughness, the examiner rephrased the question as follows:

10 At page 23, it is noted that the Fracture Toughness of 70% silica-filled model resin is reported as “ $0.3711 \pm 0.2033$  (last row, third column). the plus/minus ( $\pm$ ) sign indicates a fluctuation factor which is shown as 0.2033; that is higher than 50% value of the toughness which is reported at 0.3711. Such value is too large to be a fluctuation. Is this a typographical error?”

15 The referenced data is accurate. The large fluctuation factor is one of the types of problems that renders silica difficult to work with as a filler in the claimed materials, as evidenced by the follow teaching in the specification:

20 Colloidal fumed silica nanoparticles currently are used as fillers in “microfilled” composite dental restorative resins. These particles can increase the hardness and wear resistance of photocured matrix polymers; however, the particles are not radiopaque and **cannot be homogeneously dispersed within the matrix resin because of interparticle associations. The resulting coagulation leads to a substantial increase in viscosity and a consequent decrease in composite workability. This places a severe limitation on the practical filler loading in “microfilled” composites.**

25 Specification, p. 1, ll. 22-p. 2, l. 2 (emphasis added). The claimed metal oxide particles are believed to solve such problems.

**Rejections under 35 U.S.C. § 112**

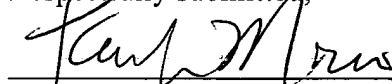
30 The examiner rejected the claims as indefinite on a number of grounds. The claims have been amended in a manner which is believed to overcome the rejections. The

amendments primarily are made to correct clerical errors (e.g., to change "moeity" to "moiety"), to correct dependency in view of canceled claims, and to add "of hydroxyl groups" to clarify that the various phrases ("complexed fraction," "reactive portion," "less reactive portion") all referred to the hydroxyl groups. This was true before the amendment, and is true after the amendment. The amendments do not narrow the claims. Most of the dependency changes also do not narrow the claims, and in fact may even broaden a number of the claims.

### CONCLUSION

For all of the foregoing reasons, Applicant respectfully requests entry of the amendments and consideration and allowance of all of the pending claims, including those previously withdrawn due to the restriction requirement. Applicant also requests that the attached Form 1449 be made of record. The Commissioner is hereby authorized to charge any fees in connection with this response, or to credit any overpayment, to Deposit Account No. 50-0997 maintained by Paula D. Morris & Associates, P.C.

Respectfully submitted,



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